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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/264,719	03/09/1999	TETSUNOBU KOCHI	35.C13389	3618

5514 7590 07/29/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

WU, DOROTHY

ART UNIT	PAPER NUMBER
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2697

DATE MAILED: 07/29/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/264,719

Applicant(s)

KOCHI ET AL.

Examiner

Dorothy Wu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 8 and 9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2003 and 23 April 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The corrected or substitute drawings were received on April 21 and 23, 2003. These drawings are acceptable.

Specification

3. The corrected specification was received on April 21, 2003. The specification is acceptable, and has been entered.

Response to Arguments

4. Applicant's arguments filed April 21, 2003 have been fully considered but they are not persuasive.

The applicant has argued: "However, nothing has been found, or pointed out, in *Williams*, that would teach or suggest the manner of control recited in Claim 8, in particular, the supply of voltage from outside the solid-state image pickup element. Applicants urge that *Williams* fails to teach the recited first and second terminals and first and second wirings." The examiner respectfully disagrees. *Williams* does teach first and second terminals, V_R 22 and V_T 16, and

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their respective wirings (Fig. 6). Williams also teaches that the voltages on V_R 22 and V_T 16 will change during the operation of the solid-state image pickup element (col. 3, lines 36-42, line 54-col. 4, line 11). It is an inherent feature of a solid-state image pickup element to have a central control unit that controls the changing voltages applied to gates, which reads on the supply of voltage from outside.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Williams et al, U.S. Patent 3,845,295.

Regarding claim 8, the admitted prior art teaches a solid state image pickup element (page 5, line 10) in one-chip formation, which reads on formation on a single semiconductor substrate (page 5, lines 14-15), comprising a pixel including a photoelectric conversion element which includes an accumulation area (photodiode area) where signal charge generated by photoelectric conversion is accumulated (page 5, line 27-page 6, line 1), a transfer switch (transfer gate 701) which transfers the signal charge accumulated in said accumulation area (page 5, line 24-page 6, line 1), a floating diffusion portion (floating diffusion area 711) which receives the signal charge through said transfer switch (page 5, line 27-page 6, line 1), and a reset switch (reset gate 712) which resets an electric potential of said floating diffusion portion

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(floating diffusion area 711) (page 6, lines 6-9). The admitted prior art also teaches a first terminal and first wiring by which a voltage is supplied to said reset switch and a second terminal and second wiring by which a voltage is supplied to a transfer switch (Fig. 4). The admitted prior art does not teach that the voltages are supplied from outside said solid-state image pickup element. Williams et al teaches that the voltages on the reset and transfer gates (V_R 22 and V_T 16) will change during the operation of the solid-state image pickup element (col. 3, lines 36-42, line 54-col. 4, line 11). It is an inherent feature of a solid-state image pickup element to have a central control unit that controls the changing voltages applied to gates, which reads on the supply of voltage from outside. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the central control unit that supplies control voltages from outside of Williams et al with the admitted prior art to make a solid-state image pickup element that supplies voltages from outside. One of ordinary skill would have been motivated to make such a modification to increase the fill factor of the solid state image pickup element by allocating more surface area for collecting charges and reserving a separate, remote section of the substrate for control.

Regarding claim 9, Williams et al teaches a first voltage supplied to the first, reset terminal and a second voltage lower than the first voltage supplied to said second, transfer terminal (col. 3, lines 36-42, line 54-col. 4, line 11). The voltage potential setting circuit which generates a plurality of different electric power voltages is inherently taught.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dorothy Wu whose telephone number is 703-305-8412. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

Or faxed to:

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703-872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is 703-306-0377.



DW
July 25, 2003



ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600